Epitomes

Important Advances in Clinical Medicine

Ophthalmology

The Scientific Board of the California Medical Association presents the following inventory of items of progress in ophthalmology. Each item, in the judgment of a panel of knowledgeable physicians, has recently become reasonably firmly established, both as to scientific fact and important clinical significance. The items are presented in simple epitome and an authoritative reference, both to the item itself and to the subject as a whole, is generally given for those who may be unfamiliar with a particular item. The purpose is to assist busy practitioners, students, research workers or scholars to stay abreast of these items of progress in ophthalmology that have recently achieved a substantial degree of authoritative acceptance, whether in their own field of special interest or another.

The items of progress listed below were selected by the Advisory Panel to the Section on Ophthalmology of the California Medical Association and the summaries were prepared under its direction.

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Steroid-Induced Glaucoma

STEROID-INDUCED increase of intraocular pressure has been described for more than 30 years; however, it remains a cause of visual loss and iatrogenic glaucoma. Unfortunately, steroid drops are often prescribed for relatively minor conditions such as blepharitis or eye irritations, conditions for which steroids are often unnecessary. Steroids decrease outflow facility, resulting in a condition simulating primary open-angle glaucoma. If prolonged intraocular pressure elevation occurs, damage results to the optic nerve with irreversible loss of visual field.

Both endogenous and exogenous steroids may induce pressure elevations in susceptible persons. Topical, periocular and systemic steroid medications are involved in the vast majority of cases. Even steroid preparations applied to the skin away from the eye may induce elevations of intraocular pressure. Susceptibility to topical steroids has been tested extensively. From these studies a substantial percentage (33%) of the population were found to be at risk, particularly patients with preexisting open-angle glaucoma and their first-degree relatives. In addition, persons with myopia and those with diabetes mellitus are also at increased risk. The degree of pressure elevation depends on individual susceptibility and the concentration, duration and frequency of the dose. Increased intraocular pressure may occur as early as one to two weeks or as late as months to years after initiation of therapy.

The clinical spectrum of corticosteroid-induced glaucoma varies with a patient's age. In infants often treated with topical steroids as part of an antibiotic-steroid combination, the disease simulates congenital glaucoma with an enlarged eye and corneal edema. In older children and adults, the disorder resembles primary open-angle glaucoma, and is often asymptomatic.

The most effective treatment of steroid-induced glaucoma is discontinuation of the corticosteroid. Within a few days to weeks, a prompt reduction of intraocular pressure occurs. Occasionally the increased pressure persists. If this occurs or if the steroid therapy must be continued, standard antiglaucoma medications may lower the pressure. If unsuccessful, laser or intraocular surgical treatment may be necessary for glaucoma management.

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REFERENCES

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Macular Degeneration

MACULAR DEGENERATION is the leading cause of new blindness in the United States and accounts for 14% of cases of new blindness in persons older than age 65 years. Age-related macular degeneration covers a wide spectrum of clinical disease and visual dysfunction. The prevalence of this disease in the older-than-50-years age group is very high but only a small percentage of persons have severe visual loss.

Some degree of visual loss is associated with a nonexudative degeneration that is characterized by drusen (yellow deposits on Bruch's membrane) and epithelial derangement of the retinal pigment. The more severe form of degeneration often leading to legal blindness is manifested by hemorrhage and exudation originating from choroidal neovascularization in the macula. This frequently leads to a disciform scar destroying the sen-